

## OPTICAL SIGNAL CONVERTER WITH FILTERED OUTPUT

### ABSTRACT OF THE DISCLOSURE

A WDM signal converter is provided. The signal converter is formed from a DFG and a separator, such as a WDM interleaver multiplexer/demultiplexer. The DFG receives first WDM channel signal(s) and converts into second WDM channel signal(s). The pump signal which energizes the conversion is set such that one-half of its frequency is set between, and more precisely, one-half, two WDM channels. This ensures that the second WDM signal is separated by an odd number of channels from the first WDM signal. The separator which receives the output from the DFG device, can then transmit the converted second WDM signal to one separator output port and transmit any first WDM signals, such as signals which have not been converted, to a second separator output port. In effect, the separator filters the output of the DFG.